

Changes in Parenting To or From Changes in Adolescent Well-being?

A Transactional Perspective

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## Abstract

### Changes in Parenting To or From Changes in Adolescent Well-being?

#### A Transactional Perspective

Geneviève Bloch-Torrico

The present longitudinal study examined the relation between initial and changed levels of parenting practices and changes in adjustment from early to middle adolescence. In particular, the associations of parental autonomy granting, behavioural control and warmth to adolescent depression, self-esteem, delinquent behaviours and substance use were investigated. Bi-directionality from early adolescent functioning to changes in parenting was also assessed.

Results of a series of path analyses indicated that initial levels of parenting, particularly warmth, were related to early adolescent adjustment; and that initial levels of parental warmth were associated to changes in self-esteem, but not in the other indices of adjustment. Other findings revealed that changes in all three parenting practices were connected to change in the developmental trajectories of adolescents over a four-year period, from approximately age 13 at Time 1 year of the study and age 16 at Time 2. Transactional effects were found for two of the early adolescent variables, depression and substance use; these results revealed that early adolescent adjustment was linked to changes over time in parental behavioural control and warmth.

These findings point to the potential significance of adapting parenting practices throughout adolescence to enhance adolescent well-being over time, as well as to the value of contributions from specific early adolescent adjustment

variables to changes in parenting practices. Thus, the study demonstrated the importance of assessing initial levels of parenting, changes in parenting, and the contribution of early levels of adolescent adjustment to changes in parenting practices over time.

## Dedication

This is dedicated to the treasured memory of my dearest, oldest friend,

Harris Samuel Garfinkle, who passed on 8 March 2008;

And to the loving memory of my grand-father, Raphael Angel Torrico.

May you meet and laugh where time and space are just silly little jokes.

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## Table of Contents

	Page
List of Figures and Tables .....	ix
List of Appendices .....	x
Introduction.....	1
Adolescent indices of well-being.....	2
Parental autonomy granting, behavioural control and warmth.....	6
The transactional nature of the parent-adolescent relationship .....	9
The current study .....	10
Method.....	12
Participants .....	12
Measures .....	13
Procedure .....	16
Results.....	17
Preliminary Analyses.....	17
Analytic Strategy .....	17
Path Analyses.....	20
The Hypothesized Model.....	20
Adolescent Depression Model Estimation.....	20
Adolescent Delinquency Model Estimation .....	23
Adolescent Self-esteem Model Estimation.....	25
Adolescent Substance Use Model Estimation .....	27
Discussion.....	29

Parenting practices in early adolescence .....	30
Changes in parenting practices from early to middle adolescence .....	31
Transactional Findings.....	36
Implications .....	37
Limitations.....	39
Conclusions.....	40
References.....	41
Tables.....	51
Appendices .....	54



## List of Figures and Tables

	Page
Figure 1: Path analysis predicting adolescent depression initially and over time based on parenting initially and over time.....	21
Figure 2: Path analysis predicting adolescent delinquency initially and over time based on parenting initially and over time.....	24
Figure 3: Path analysis predicting adolescent self-esteem initially and over time based on parenting initially and over time .....	26
Figure 4: Path analysis predicting adolescent substance use initially and over time based on parenting initially and over time.....	28
Table 1: Intercorrelations of predictor and outcome variables.....	51
Table 2: Findings from each of the four models for all the measures of adolescent adjustment.....	52

## List of Appendices

	Page
Appendix A: Measures .....	54
Appendix B: Letter and Consent Form.....	76

## **Changes in Parenting To or From Changes in Adolescent Well-being?**

### **A Transactional Perspective**

Research in childhood and adolescence reveals that the specific strategies employed by parents in their child rearing are related to child and adolescent development, as well as to adolescent behaviour and adjustment (e.g., Baumrind, 1978, 1991; Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Sampson & Laub, 1994; Steinberg, Dornbusch, & Brown, 1992; Steinberg, Lamborn, Dornbusch, & Darling, 1992). While more positive parenting practices have been associated with a large variety of adjustment and well-being indices (e.g., Maccoby & Martin, 1983; Conger, Patterson, & Ge, 1995; Allen, Hauser, O'Connor, Bell, & Eickholt, 1996), poorer quality parenting has consistently been shown to be related to a wide range of indicators of maladjustment (Crittendale, Claussen, & Sugarman, 1994; McGee, Wolfe, & Wilson, 1997; Sheeber, Hops, Alpert, Davis, & Andrews, 1997; Strauss & Yodanis, 1996). According to a report from the National Longitudinal Study of Adolescent Health, which included over 90,000 adolescents from the United States, the existence of a close parent-adolescent relationship may be the most vitally critical factor in protecting teens from harm (Resnick, et al., 1997).

Adolescence is regarded as a period of great cognitive, physical and social development. Do the myriad developmental changes which occur throughout adolescence demand that parents adapt their practices to promote healthier adolescent adjustment? Given that adolescents have changing needs, acquire new skills and in many other ways prepare for the responsibilities of adulthood,

investigation into the relationship between change in parenting and change in adolescent adjustment is valuable. However, only a handful of studies have examined whether modifying parenting practices over the course of adolescence has any influence on teen development (Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994; Thornberry, Lizotte, Krohn, Farnworth, & Jang, 1991).

Several studies have shown that certain characteristics of the child and adolescent, such as temperament, affect and gender are in turn related to parents' use of particular parenting strategies (Morris, et al., 2002; Putnam, Sanson, & Rothbart, 2002; Weist, Freedman, Paskewitz, Proescher, & Flaherty, 1995; Resnick, et al., 1997; Leaper, 2002; Bronstein, Briones, Brooks, & Cowan, 1996). As research indicates that certain traits in adolescents are relevant to particular parental rearing practices, it is important for researchers to take into account the further possibility that the overall quality of adjustment and well-being of an adolescent might exert a specific influence on parenting practices, causing these to be reviewed and changed over time. Considering all the changes that adolescents undergo during this intensive period of transition from child- to adulthood, it stands to reason that parents might modify their ways of handling parental challenges in order to keep up with the changing needs and abilities of their teens.

#### *Adolescent indices of well-being*

Stress affects teenagers in different ways: for some it may produce decreases in self-esteem and internalizing disorders, such as depression; for others it can have externalized manifestations, for instance delinquency; for still others it

may lead to drug and alcohol use or abuse. As adolescence is a period of intense challenge and elevated stress, examining the various indices of positive adjustment trajectories, such as higher rates of self-esteem, and lower levels of depression, delinquent behaviours and substance use, in relation to parenting, serves the purpose of clarifying which parental strategies are most effective at promoting the improvement of well-being over the course of the teenage years.

Depression is an affective disorder with emotional (e.g., sadness, dejection, anhedonia), cognitive (e.g., hopelessness and pessimism), motivational (e.g., apathy and boredom) and physical symptoms (e.g., change in appetite, lethargy and sleep disturbances). Partially due to the increase in stressful events of the adolescent years, depression becomes significantly more prevalent during the teen years (e.g., Larson & Ham, 1993). In fact, depressive feelings are twice as common in adolescence than in childhood (Avenevoli & Steinberg, 2000). What is more, young adolescents report higher levels of depression than preadolescents and older teens (Simmons, Rosenberg, & Rosenberg, 1973). Luckily, it has been found that teens with close, warm family relationships tend to experience less distress due to stressful experiences than their peers (Weist, et al., 1995).

Juvenile delinquency can be defined as behaviour which violates the basic rights of others or age-appropriate societal norms or rules, or which violates the law (American Psychiatric Association, 2000), that is engaged in by youth, usually under the age of 18 years. This includes behaviours such as the destruction of property, deceitfulness, theft, threats of violence and assault. Surveys of adolescents on their involvement in status offences (violations by

definition limited to minors, for example truancy and alcohol use) or criminal offences (made up of violent crimes, such as assault and robbery, as well as property crimes, for instance, arson and theft) indicate that a staggering 60 to 80 percent have engaged in delinquent behaviour (Huizinga & Elliot, 1985).

Violations of the law are far more common among adolescents and young adults than among any other segment of the population (Federal Bureau of Investigation, 1999). Parenting has been shown to play a significant role in the prevention and treatment of adolescent delinquency. Parents can help minimize the opportunities teens have to engage in delinquent behaviour by learning to monitor them more effectively (Loeber & Stouthamer-Loeber, 1986; Matherne & Thomas, 2001). To treat chronic delinquency, there is evidence that family based interventions, for instance parent training, can be more effective than others that focus on the individual adolescent (Chamberlain & Reid, 1998; Henggeler, 1996).

Self-esteem refers to how an individual feels about her- or himself.

Although adolescence is a highly challenging time, and adolescents' feelings about themselves may fluctuate in response to daily experiences, rates of baseline or general self-esteem during middle and late adolescence tends to remain stable or increase (Block & Robins, 1993; Savin-Williams & Demo, 1983). However, studies show that self-esteem trajectories in early years of adolescence are far less stable for many individuals (e.g. Hirsch & Dubois, 1991; Block & Robins, 1993). Recent research indicates that teens with stronger family relationships are more likely than their peers to maintain positive self-esteem or develop enhanced self-esteem over time (Deihl, Vicary, & Deike, 1997).

Substance use refers to the consumption of legal drugs (alcohol and nicotine) or illicit drugs (Marijuana, Cocaine, LSD, MDMA, other amphetamines and hallucinogens). Canadian surveys have uncovered that the age of onset of substance use for most people is in pre- or early adolescence. Of those who smoke, a huge majority are pre- and young adolescents, ages 10 to 13 years. By the age of 12, a significant minority of young people have at least experimented with alcohol use. First use of cannabis occurs for a significant number of Canadian youth in Grades 8 and 9, or by the age of 13 or 14 years. First use of other substances typically occurs in subsequent years (Health Canada, 2001). Studies show that individuals with close, nurturing family relationships are less likely than their peers in distant, cold, antagonistic families to develop substance-abuse problems (e.g., Baumrind, 1991; Dishion, Capaldi, & Yoerger, 1999; Kilpatrick et al., 2000).

Large bodies of research underscore the additional issue of co-morbidity among the various manifestations of maladjustment in adolescence. That is, depression, delinquency and substance use during adolescence tend to occur together (e.g., Avenevoli & Steinberg, 2000; Brady & Kendall, 1992; Cantwel & Baker, 1991; Davis, 2006). Low self-esteem and depression also go hand in hand (Harter, 1999), as do low-self esteem and delinquency (Dishion, Andrews, & Crosby, 1995; Jang & Thornberry, 1998). As palpable links exist between depression, delinquency, self-esteem and substance use, teasing out the contribution of adaptive parenting choices from less successful ones becomes indispensable to the enhancement of well-being in adolescence. By parenting in

a way that helps teens improve any single aspect of adjustment, such as mood or self-regard, one is likely to be helping improve several other aspects of overall well-being.

*Parental autonomy granting, behavioural control and warmth*

Parenting strategies, such as autonomy granting, behavioural control and warmth, have been associated with adolescent adjustment (e.g., Crosnoe, Erickson, & Dornbusch, 2002; Lamborn et al., 1991; Allen et al., 1996). Four widely accepted, prototypical parenting schemes describe parents' levels of responsiveness and demandingness, both of which are considered critical to adjustment (e.g., Baumrind, 1978; Maccoby & Martin, 1983; Steinberg, Mounts, Lamborn, & Dornbusch, 1991), and which are constructed using differing levels of the three parenting strategies used in this study. Parental responsiveness is the extent to which the parent responds to the child's needs with acceptance and support. Demandingness refers to the degree to which the parent expects and demands responsible, mature behaviour of the child. Authoritative parents are highly responsive and equally demanding, while authoritarian parents are not responsive yet highly demanding. Indulgent parents are highly responsive and are not demanding, and indifferent parents are neither responsive nor demanding with their children. In general, children raised by parents with authoritative parenting strategies (high warmth and high behavioural control), which include development of autonomy and self-direction, tend to have better social, academic and creative skills, as well as higher general self-esteem than adolescents from authoritarian strategies (low warmth and high behavioural control), indulgent



strategies (high warmth and low behavioural control) or indifferent homes strategies (low warmth and low behavioural control). Adolescents from authoritarian homes experience restricted autonomy and are more likely to be dependent and passive, and achieve less success in social, academic and creative realms, as well as experience lower self-esteem. Adolescents from indulgent homes are often less mature, less responsible and more conforming; while those from indifferent homes tend to be more impulsive and more likely to engage in delinquent activities and early experimentation of substances use and sex (Fuligni & Eccles, 1993; Kurdek & Fine, 1994; Lamborn, et al., 1991; Steinberg, 2001).

Autonomy granting refers to the parental encouragement of adolescent individual expression and decision-making. It is a parenting practice whereby the parent allows the teen to make choices about activities and behaviour and encourage the development of independence (Silk, Morris, Kanaya, & Steinberg, 2003). Autonomy granting has been shown to be related to lower levels of substance abuse (Dobkin, Tremblay, & Sacchitelle, 1997), self-esteem and ego development, and social competence (Allen, et al., 1994). Behavioural control refers to levels of parental monitoring and limit setting (Steinberg, 1990). It has been found to be negatively associated with externalizing problems such as delinquency and aggression (Dornbusch et al., 1985; Gray & Steinberg, 1999). Parental warmth is the degree to which the parent is supportive, accepting and affectionate. When parenting is based on a warm parent-adolescent relationship, teens are more likely to admire, identify with, and form attachments to their

parents, often leading to increased openness to parental influence (Darling & Steinberg, 1993; Sim, 2000).

Adolescence is a period of increased risk for the onset of several problem behaviours, such as delinquency and substance use, and engaging in these types of behaviours tends to disrupt healthy patterns of development and adjustment (Erickson, Crosnoe, & Dornbusch, 2000), and may precede dysfunction in adulthood (McCord, 1990). In a study of delinquency and parenting by Palmer & Hollin (2001), the most significant predictors of delinquency scores were parenting variables. This study supports the conclusion that a parental style perceived as warm, involved and inductive, is associated with lower levels of delinquency in adolescence. Further studies have shown a link between parenting strategies and substance use among adolescents. For example, a study by Ford (2005) found that substance use and delinquency were directly related to one another and were also influenced by a similar set of causal factors, such as parenting strategies. Family bonding as measured in this research was a significant predictor of substance use and delinquency.

A more in-depth understanding of how parenting changes shape adolescent trajectories could help clarify which strategies are most conducive to greater increments of adjustment over time. Thus, adapting certain parenting practices over time to accommodate changes in adolescent needs and competence levels might effect greater benefits in overall adolescent well-being than maintaining strategies. The strategies that work to reduce the rates of any of the

indices of maladjustment, and that help promote positive self-regard, are those that may advance well-being on the whole.

*The transactional nature of the parent-adolescent relationship*

Despite clear evidence of the impact of parenting on adolescent trajectories of adjustment, research has found that parenting practices are shaped by children's behaviour (Morris et al., 2002; Stice & Barrera, 1995). Responsible, confident, curious teens tend to draw warmth and flexibility from their parents. Antagonistic, dependent or immature teens are more apt to elicit colder, harsher or more passive parental responding (Rueter & Conger, 1998). Thus, it cannot be assumed that changes in parenting over time are unrelated to initial levels of adolescent adjustment. The manifestations of well-being in early teenagehood might influence parental rearing choices through the middle teen years. The possibility of a reversed or "adolescent-parent" relationship makes it important to know the direction of the influence in order to comprehend some of the complexity inherent in the relationship as it progresses. Another consideration regards the circumstances in which each party influences the other, the transactional or "parent-adolescent-parent" relationship.

A bi-directional exploration of change in the parent-adolescent relationship will take into account the contribution from both directions; how parenting behaviours and changes in these behaviours influence the adolescent, and whether adolescent behaviours and changes in these behaviours impact the parenting (Patterson & Fisher, 2002). This bi-directional analysis might also show which changes incur the most impact, the adapted parenting tactics or the

differences in adolescent adjustment over time. Perhaps it will also provide clues as to when change might produce the greatest effects.

### *The current study*

The four-year longitudinal study was part of a larger research programme investigating adolescent relationships and well-being. The aim of this research was to explore whether changes in parenting from early to middle adolescence have an impact on adolescent developmental trajectories (see Paikoff & Brooks-Gunn, 1991). In order to explore the nature of the relationship between change in parenting and change in adolescent adjustment, we examined change over a period of four years in three parenting variables and four indices of adolescent adjustment bi-directionally. The present study hopes to offer insight into which parenting factors are involved in well-being during adolescence, and the impact of these factors from early to middle adolescence. It may also serve to highlight any links found between adolescent developmental trajectories and adaptations to parenting practices. This expanded view of the parent-adolescent relationship could help broaden our general conception of adolescent development and of the progressive role of parenting throughout these special years.

The hypotheses studied in this project were as follows. It was expected that increases in two positive parenting strategies and consistency in a third would predict increments of adjustment from early to middle adolescence. In addition, it was anticipated that initial adolescent adjustment levels would predict shifts over time in parenting. The specific hypotheses were that: 1) Initial levels of parental autonomy granting, behavioural control and warmth would be related positively

to adolescent adjustment over time; that 2) An increase in autonomy granting and warmth from early to middle adolescence would predict decreases in depression, delinquency and substance use, as well as increases in self-esteem from early to middle adolescence; and that 3) Early adolescent functioning would predict changes in parenting. Examining bi-directionality in this way offered the additional benefit of ruling out reversed causality. Data for the study was collected annually over four consecutive years. Time 1 refers to year one of the study and Time 2 refers to year four.

The results of this study were expected to show that initial levels of parenting variables would predict later levels of adjustment in adolescents, and that changes over time in parenting strategies would be significantly associated with change in levels of adolescent adjustment and well-being over the years between early and middle adolescence. We also anticipated that early levels of adolescent adjustment would be related to changes in parenting practices. We expected to find that increases from Time 1 to Time 2 in parental autonomy granting and warmth would predict higher adolescent self-esteem, in addition to lower levels of depression, less delinquent behaviour and less substance use from Time 1 to Time 2. We also predicted that consistent levels of parental behavioural control over time would correlate with higher adolescent self-esteem and lower levels of the three remaining adjustment indices over time.

## Method

### *Participants*

The sample for the present study consists of 173 adolescents (90 females), aged 12 to 14 years ( $M = 13$  years) at Time 1, enrolled in grades 7 and 8 of a large, English-language public high school in a suburb of Montreal, Quebec. As reported by the participants, 75.4% of the participants were from two-parent homes, with approximately 84.7% from intact and 15.3% from blended homes. Approximately 92.5% of the adolescents spoke English at home, 17.9% spoke French at home and 21.4% spoke another language. Almost all participants (96.5%) reported having lived in Canada all their lives. Almost two-thirds (62%) of participants reported having one ethnic/cultural background, whereas 35% reported having two, 23% reported having three. The ethnic/cultural background breaks down as follows: approximately 49.1% "Other European," 48% reported being "English," 27.2% "French," 5.8% "South West Asian," 5.8% "West Indian," 5.2% "Asian," 1.2% "Aboriginal," 1.2% "Latin American" and 1.2% "African." Of the 35% of the sample who reported two ethnicities, 14% reported being both English and French Canadian, and 21% reported a different combination. Of the 23% of the sample who reported three ethnicities, 16% reported English, French and European backgrounds, which is typical, and 3% reported another combination. Family socio-economic status (SES) was derived from information on the work status, occupation, job activities and education of the parent(s) (Hollingstead, 1975), which were weighted equally and ranged from

11 to 60. Mean SES was 33 ( $SD = 9.81$ ), which is characteristic of skilled craftsmen, clerical workers and sales persons.

### *Measures*

Participants were asked to provide basic demographic information on General and Parent Information forms, and to fill out the following questionnaires: the Parenting Style Inventory III (What Is Your Family Like?), a shortened Child Depression Inventory (Feelings and Ideas), a General Self-esteem and Self-description Questionnaire, a Delinquency Scale (Behaviours), and an Alcohol and Drug Use Scale. (See Appendix A for a copy of measures.)

*Demographic information.* General information collected at T1 and T2 included 7 items used to assess the sample's representation of Quebec's adolescent population (age, gender, grade, both parents' marital status, whether step-parents live with the adolescent, languages spoken at home, and ethnic/cultural background). Parent information gathered at T1 examined the following demographic components for each parent; living arrangements, education level, employment status, job title, principal work activities, industry, and for parents not currently employed for pay, whether they were seeking work, keeping house or unable to work.

*Parenting.* Dimensions of parenting were assessed with the 15-item Parenting Style Inventory III (PSI-III, adapted by Miners, 2001), an adapted version of the 16-item Parenting Style Inventory II (PSI-II, Darling & Toyokawa, 1997). The PSI-III questionnaire yields three scales with five items for each: parental autonomy granting, parental behavioural control and parental warmth.

Items are rated on a five-point scale where 1 is “Strongly Disagree” and 5 is “Strongly Agree.” The original PSI-II assessed the three dimensions of maternal parenting style using five items per dimension. Following a pilot study by Miners (2001) of 50 fifth- and sixth-grade children conducted to evaluate the generalizability of the PSI-II, minor modifications were made to increase the internal reliability of the measure overall. Consequently, the PSI-II was changed and became the PSI-III through the following modifications: (a) both parents were emphasized in contrast to mother only; (b) the wording of four items was modified; (c) three items were removed; and (d) six new items were introduced. Internal consistencies for parental autonomy granting, behavioural control and warmth were: .77, .61 and .82, respectively.

*Depression.* The shortened Child Depression Inventory (CDI) is a 12-item measure of various expressions of depressive feelings and cognitions adapted from Kovacs, 1985. The item treating the topic of suicide in the original CDI was eliminated for ethical reasons. The original scale, administered at T1, consisted of 26 items. Each item has three variations in severity which were rated on a scale from 0 (score on top line) to 2 (score on bottom line). At T2, the measure was shortened to 12 items based on highest item-total correlations for T1. Only the 12 items used at T2 were analysed for T1. The internal consistency of the scale was .76 in the present study. A high score on the scale indicated high depressive feelings and cognitions.

*Delinquency.* To assess frequency of delinquent behaviours committed by the adolescent over the course of the 12 months prior to testing at T2,



participants were given a 12-item delinquency questionnaire adapted from Elliott, Huizinga, & Ageton (1985). At T1, a 19-item measure was given. Each item assessed whether the subject had ever engaged in a given behaviour, and if so, how often over the course of the last year. Participants replied to a Yes or No portion for each item, followed by a frequency rating from 0 to 13 times or more if they answered Yes to the first part of the item. At T2, the measure was shortened to 12 items based on T1 highest item-total correlations. Items include behaviours ranging in scope from destroying property to disorderly conduct, and stealing. The internal consistency of the frequency scale was .74 at T1 and .83 at T2. For the variety scale, reliability was .75 at T1 and .83 at T2. A high score on a subscale indicated high frequency/variety of delinquent behaviour.

*General Self-esteem.* A measure of general self-esteem, created from The Self-description Questionnaire (SDQ-II, adapted from Marsh, 1990) was used to assess general perception of self-competency. At T1, the measure consisted of 5 items used to assess general self-esteem ( $\alpha = .76$ ). At T2, the measure comprised two subscales, one for general self-esteem ( $\alpha = .88$ ) and the other for same-sex peer ( $\alpha = .82$ ). Only the subscale for general self-esteem was relevant to this study. The item was rated on a scale from 1 (False) to 6 (True) with Mostly False, More False Than True, More True Than False and Mostly True in between. A high score on the scale indicated high general self-esteem.

*Substance Use.* To measure substance use, participants were asked to fill out a 7-item questionnaire (The Alcohol and Drug Use Scale) adapted from Elliott, Huizinga, & Ageton (1985) that asks about the frequency with which a

particular substance was used over the past year, ranging from 0 to 12 (0 to 12 times) to 13 (13 times or more). One of the items required a Yes or No response and another asked for a report of either the number of cigarettes used per day or per month. The internal consistency of the drug variety scale was .95 at T1 and .84 at T2. A high score on the scale indicates high variety of substance use.

### *Procedure*

Following permission to carry out the study provided by the school board and the school principal, participants from grades seven and eight were recruited for a larger study on adolescent adjustment and well-being. Students were informed of the study during class time, invited to participate for that year, and provided with a letter describing the project, as well as a consent form (see Appendix B). Written consent for participation at T1 was required from both adolescent and parent. At T2, three years later, written consent was required from only the adolescent. All students who returned a valid consent form were entered into a draw for one of several gift certificates at a music store or movie theatre. As an additional incentive, all students who completed the questionnaires were entered into a draw for a CD player at T1 and an MP3 player at T2.

At T1 and three years later at T2, participating students completed questionnaires on general information, social desirability, family relationships (parenting style) and adjustment (depressive symptoms, delinquent acts, self-esteem and substance use). Data collection was conducted at school in groups of approximately 20 students each; either in a classroom or in a separate room. Participants filled out all relevant demographic, parenting and adjustment

measures during the first of two annual testing sessions. At the end of the testing session, students were thanked and offered a modest treat of candy or chocolate. They were also invited to indicate on a form any desire to be contacted by the school psychologist, and/or a member of the research team to address questions or concerns. They were given the research laboratory's telephone number and several testers' full names and invited to call with any questions.

## Results

### *Preliminary Analyses*

The correlations between all of the variables used in the study are presented in Table 1. This correlation matrix served as the input for the subsequent analyses.

### *Analytic Strategy*

Path analyses were used to examine the relationships between parenting and adolescent adjustment outcomes, while controlling for age. Path coefficients indicate the unique contribution of a particular predictor to the outcome while controlling for the effects of all the other predictors of the outcome. In regard to the "Goodness of Fit" of the entire model, a significant Chi Square statistic indicates that a model deviates from the null model (i.e., with all possible paths specified), a model corresponding to completely unrelated variables, to a degree that could not be attributed entirely to chance (Bentler, 1990). However, this statistic is exceptionally sensitive to sample size. As a result, other indices are also examined to evaluate model fit. CFI refers to Bentler's (1990) Comparative Fit Index. It represents the proportion of overlap between the proposed model and

a perfectly fitting model. It is less affected by sample size than is the Chi Square value. The CFI ranges from 0 to 1 with values above .90 indicating an acceptable model fit.

Structural equation modeling, using the EQS programme (Bentler, 1995), was employed to test the hypotheses in relation to each of the dependent variables. Path analyses assessed change in parenting practices over the three-year period. A series of four path analyses were conducted to test for change over time in four criterion variables, i.e., adolescent depression, frequency of delinquent acts over the past year, general self-esteem, and variety of substance use over the past year from change over time in parenting practices.

Hypotheses postulated in this study were that initial levels of parenting would predict self-reported change over time in indices of adolescent functioning; that constructive changes in parenting practices over time would predict improvements in adolescent adjustment; and that early adolescent functioning would predict changes in parenting. Path analyses were performed treating each of the adolescent variables separately along with the block of parenting variables. This analytic organization produced one model for each specific hypothesis in terms of each unique criterion variable. To assess change over time in adolescent adjustment and parenting, the first model of each analysis was examined for variable stability.

Furthermore, in order to test for directionality of effect, the final model of each analysis assessed whether initial levels of adjustment significantly predicted changes in parenting over time. By reversing the course of the analyses from each

index of early teenage well-being to the parenting variables at Time 2, we aimed to assess the extent to which changes in parenting were correlated to early adolescent functioning, and in this way control for the direction of the correlation between change in parenting and adolescent adjustment.

Accordingly, four models were tested for each of the four dependent or outcome variables. Model 1 was a simple stability model in which direct paths were included from each variable at Time 1 to the corresponding variable at Time 1. This model was not intended to test any particular hypotheses, but instead served as a comparison point for the findings of the models that followed it. By testing for stability between each variable from year 1 (Time 1) to year 4 (Time 2) of the study, we were able to ascertain that any differences occurring in later models were attributable to either error or actual change in those models where stability in the variables was verified.

Model 2 was designed to test the first hypothesis, specifically that initial levels of parenting would lead to changes in the measures of adolescent functioning. In this second model, paths were included from the parenting measures at Time 1 to the measures of adolescent functioning at Time 2. The third model tested the hypothesis that changes in parenting would be associated with changes in adolescent functioning. To test this hypothesis, paths from the parenting measures at Time 2 to the measures of adolescent functioning at Time 2 were included in the model. To test the third hypothesis, the fourth model examined the effects of the Time 1 adolescent measures on the Time 2 parenting measures. These models examined whether a transactional relationship existed

between early levels of adolescent adjustment and changes in parenting practices. In other words, model four examined whether adolescent functioning predicted changes in parenting.

### *Path Analyses*

*The Hypothesized Model.* Using EQS, the relationships over time were examined between three parenting variables (i.e., Autonomy Granting, Behavioural Control and Warmth) and four variables of adolescent adjustment (i.e., Depression, Delinquency, Self-esteem and Substance Use). The hypothesized models for Adolescent Depression, Delinquency, Self-esteem and Substance Use are presented in Figures 1, 2, 3 and 4, respectively. The absence of a line connecting variables implies a lack of a hypothesized direct effect. Different types of single arrow lines indicate various models within each analysis. In each analysis, Model 1 is marked by a straight line, Model 2 by a doubled straight line, Model 3 by a dashed and dotted line, and Model 4 by a dotted line.

*Adolescent Depression Model Estimation.* In Analysis A: Adolescent Depression (see Figure 1), the first model evaluated stability from Time 1 (T1) to Time 2 (T2) for four variables (i.e., parental Autonomy Granting, Behavioural Control and Warmth from T1 to T2 and adolescent Depression from T1 to T2). All four variables were found to be stable over time,  $\chi^2(15, N = 171) = 15.18$   $p < .44$ , CFI = .99; standardized coefficients Autonomy Granting = .27,  $p < .05$ , Behavioural Control = .34,  $p < .05$ , Warmth = .34,  $p < .05$ , and Depression = .35,  $p < .05$ ). The stability of parenting variables was the same for all analyses in the

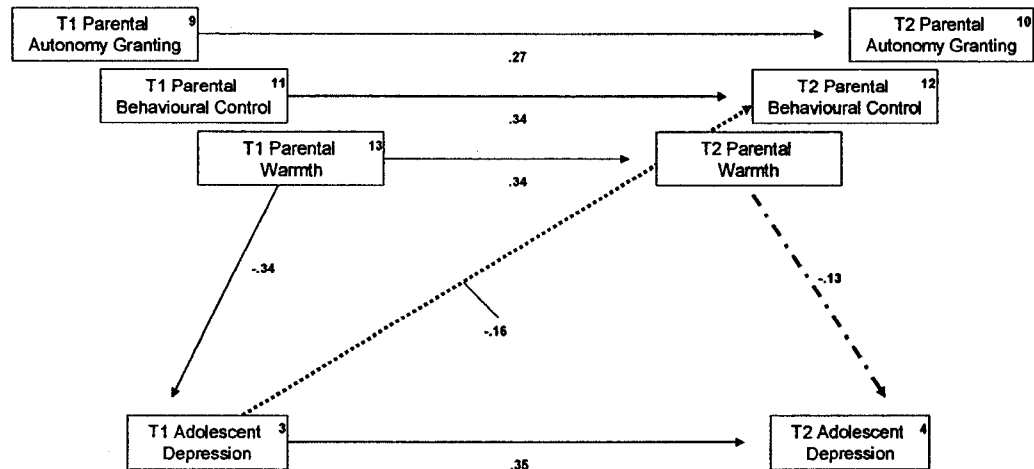


Figure 1. Path analysis predicting adolescent depression initially and over time based on parenting initially and over time. In *Analysis A: Adolescent Depression*, Model 1 is represented by a straight line, Model 3 by a dashed and dotted line, and Model 4 by a dotted line.

series. Variable stability entailed that in the following models any differences found at T2 would be attributable either to error or to change in the given variable over time. Other findings were that Parental Warmth T1 negatively predicted adolescent Depression T1 (standardized coefficient =  $-.34$ ,  $p < .05$ ).

The hypothesized models were tested next. Represented in Model 2 (Figure 1), the first hypothesis that parenting variables at T1 were negatively related to Depression T2 was not confirmed. No support was found for the hypothesized model in terms of the Satorra-Bentler scaled  $\chi^2$  test statistic and comparative fit index (CFI),  $\chi^2(12, N = 171) = 13.65$   $p < .32$ , CFI = .99. There was no evidence that change in depression from early to middle adolescence was influenced by parenting in early adolescence.

Partial support was found for the second hypothesis, represented in Model 3 (Figure 1),  $\chi^2(11, N = 171) = 11.04$   $p < .44$ , CFI = 1.0; an increase in parental Warmth over time predicted a marginally significant decrease in Depression over time (standardized coefficient =  $-.13$ ,  $p < .05$ ), whereas an increase in parental Autonomy Granting did not. In Model 4 (Figure 1), parental Behavioural Control T2 was found to be negatively predicted by adolescent Depression T1 (standardized coefficient =  $-.16$ ,  $p < .05$ ),  $\chi^2(8, N = 171) = 6.16$   $p < .63$ , CFI = 1.0. Teens who were initially less depressed experience increased parental monitoring over time in comparison to their peers with higher initial levels of depression. For a summary of results, see Table 2.



*Adolescent Delinquency Model Estimation.* In Analysis B: Adolescent Delinquency, Model 1 (see Figure 2) evaluated stability from T1 to T2 for four variables (i.e., parental Autonomy Granting, Behavioural Control and Warmth from T1 to T2 and adolescent Delinquency from T1 to T2). All four variables were found to be stable over time,  $\chi^2(15, N = 171) = 25.72, p < .04, CFI = .96$ ; standardized coefficient Delinquency = .41,  $p < .05$ ). Both parental Behavioural Control T1 and Warmth T1 negatively predicted adolescent Delinquency T1 (standardized coefficients Behavioural Control T1 = -.18,  $p < .05$  and Warmth T1 = -.25,  $p < .05$ ). Teens with warmer parental figures that monitored their behaviour were less likely to engage in delinquent behaviours than their peers.

The first hypothesis, represented in Model 2 (Figure 2), was tested next. None of the parenting variables at T1 were negatively related to Delinquency T2; thus, this hypothesis was not confirmed,  $\chi^2(12, N = 171) = 24.37, p < .02, CFI = .95$ . There was no association from early parenting to later delinquent behaviour. The second hypothesis illustrated in Model 3 (Figure 2), was partially confirmed. Increases over time in parental Autonomy Granting and Behavioural Control negatively predicted levels of Delinquency over time (standardized coefficients Autonomy Granting = -.15,  $p < .05$  and Behavioural Control = -.20,  $p < .05$ ), whereas increases in parental Warmth did not. More emphasis on adolescent accountability and decision-making, as well as increased supervision by parents was linked to decreased levels of delinquent behaviours.

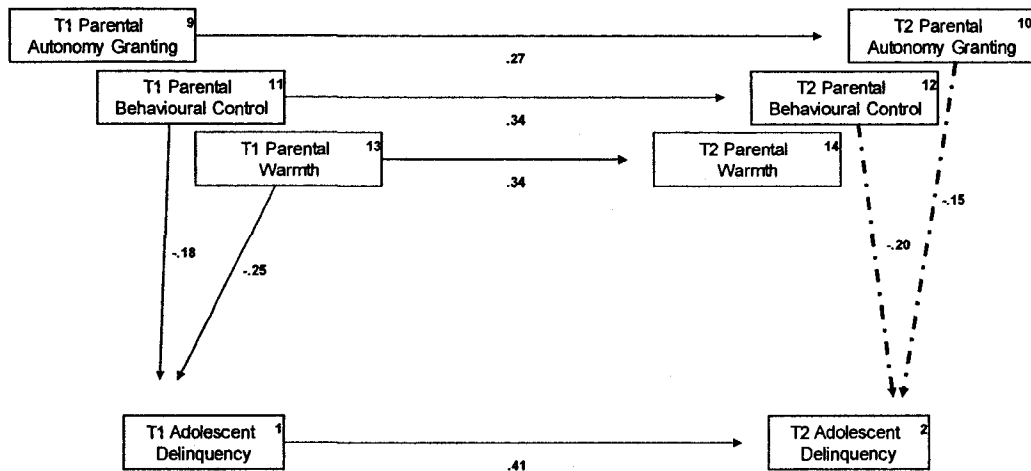


Figure 2. Path analysis predicting adolescent delinquency initially and over time based on parenting initially and over time. In *Analysis B: Adolescent Delinquency*, Model 1 is represented by a straight line, and Model 3 by a dashed and dotted line.

In regards to the third hypothesis, no effects were found from Delinquency T1 to any of the parenting variables T2, as shown in Model 4 (Figure 2),  $\chi^2(6, N = 171) = 5.57, p < .47, CFI = 1.0$ . Early delinquency did not promote change in parenting practices over time, thus no support was found for a transactional relationship. For a summary of results, see Table 2.

*Adolescent Self-esteem Model Estimation.* In Analysis C: Adolescent Self-esteem, Model 1 (see Figure 3) indicated stability from T1 to T2 for the four variables (i.e., parental Autonomy Granting, Behavioural Control and Warmth from T1 to T2 and adolescent Self-esteem from T1 to T2),  $\chi^2(15, N = 171) = 20.50, p < .15, CFI = .98$ ; standardized coefficient Self-esteem = .38,  $p < .05$ ). Both parental Warmth T1 and Behavioural Control T1 were found to predict positively adolescent Self-esteem T1 (standardized coefficients Behavioural Control T1 = .12,  $p < .05$  and Warmth T1 = .35,  $p < .05$ ), pointing to concurrent covariation between parenting and self-regard in early adolescence. The first hypothesis (Model 2, Figure 3), that parenting variables at T1 were positively related to Self-esteem T2, found slight support. Warmth T1 positively predicted changes in adolescent self-esteem at T2 ( $\chi^2(12, N = 171) = 19.48, p < .08, CFI = .97$ ; standardized coefficient Warmth T1 = .10,  $p < .05$ ).

The second hypothesis, represented in Model 3 (Figure 3), was supported,  $\chi^2(19, N = 171) = 8.82, p < .45, CFI = 1.0$ ; parenting changes positively predicted Self-esteem T2. An increase over time in parental Autonomy Granting and Behavioural Control predicted a significant increase in Self-esteem over time

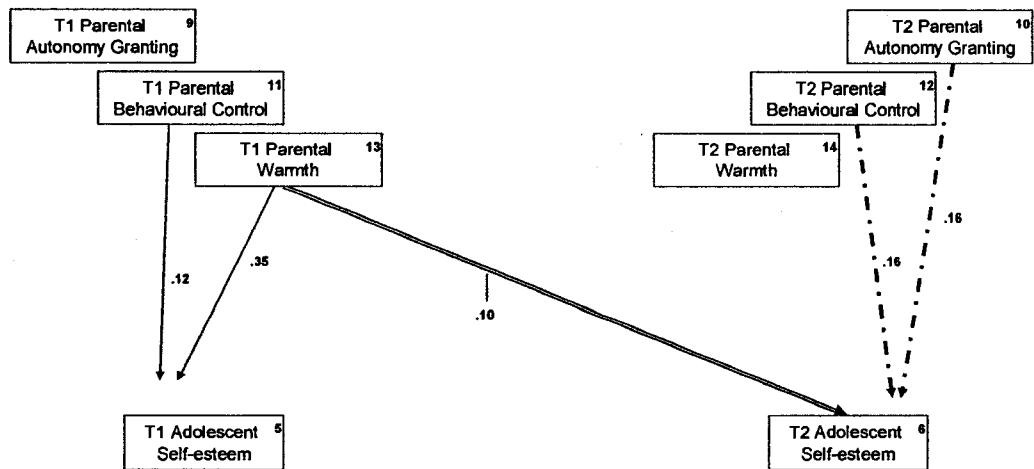


Figure 3. Path analysis predicting adolescent self-esteem initially and over time based on parenting initially and over time. In *Analysis C: Adolescent Self-esteem*, Model 1 is represented by a straight line, Model 2 by a doubles straight line and Model 3 by a dashed and dotted line.

(standardized coefficients Autonomy Granting = .16,  $p < .05$  and Behavioural Control = .16,  $p < .05$ ). Teens with parents who expected more responsible, age-appropriate behaviour and increased their monitoring behaviours over time tended to show increments in self-regard from early to middle adolescence. The third hypothesis, seen in Model 4 (Figure 3), shows that no effects were found from Self-esteem T1 to any of the parenting variables at T2,  $\chi^2(16, N = 171) = 5.78$ ,  $p < .45$ , CFI = 1.0. This implies that regardless of a young teen's level of self-regard, parents were unlikely to modify their practices over time. For a summary of results, see Table 2.

*Adolescent Substance Use Model Estimation.* In Analysis D: Adolescent Substance Use, Model 1 (see Figure 4) verified stability from T1 to T2 for all four variables (i.e., parental Autonomy Granting, Behavioural Control and Warmth from T1 to T2 and adolescent Substance Use from T1 to T2),  $\chi^2(15, N = 171) = 41.52$ ,  $p < .00$ , CFI = .90; standardized coefficient Substance Use = .25,  $p < .05$ ). Parental Warmth T1 negatively predicted adolescent Substance Use T1 (standardized coefficient = -.22,  $p < .05$ ). Teens who reported warmth in early adolescence used fewer substances.

As seen in Model 2 (Figure 4), the first hypothesis, that parenting variables at T1 would be negatively related to Substance Use T2, was not confirmed. No support was found for the hypothesized model,  $\chi^2(1, N = 171) = 39.26$ ,  $p < .00$ , CFI = .89. Early parenting practices did not impact on adolescent substance use trajectories. Model 3 (Figure 4) illustrates that partial support was found for the second hypothesis,  $\chi^2(9, N = 171) = 10.23$ ,  $p < .33$ , CFI = 1.0;

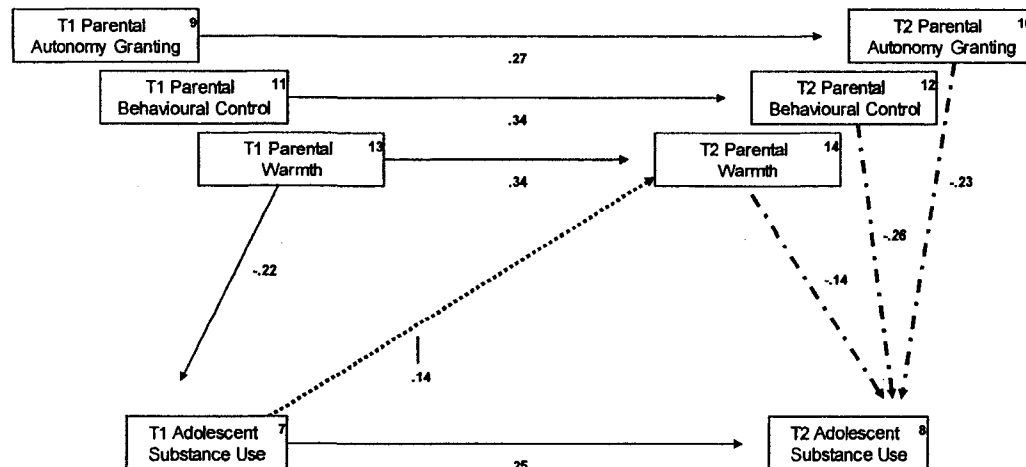


Figure 4. Path analysis predicting adolescent substance use initially and over time based on parenting initially and over time. In *Analysis D: Adolescent Substance Use*, Model 1 is represented by a straight line, Model 3 by a dashed and dotted line, and Model 4 by a dotted line.

increases over time in parental Autonomy Granting and Behavioural Control negatively predicted Substance Use over time (standardized coefficients Autonomy Granting =  $-.23$ ,  $p < .05$  and Behavioural Control =  $-.26$ ,  $p < .05$ ), while an increase in Warmth predicted only a marginally significant decrease in Substance Use over time (standardized coefficient =  $-.14$ ,  $p < .05$ ). Adolescents who were expected to behave more responsibly and who were monitored more by parents over time tended to decrease their rates of substance use more from early to mid-adolescence than their peers.

In Model 4 (Figure 4), the third hypothesis found partial support; parental Warmth T2 was positively predicted by Adolescent Substance Use T1 (standardized coefficient =  $.14$ ,  $p < .05$ ),  $\chi^2(6, N = 171) = 6.10$ ,  $p < .42$ , CFI = 1.0. Parents of adolescents with lower levels of substance use early on were more likely to show decreased warmth over time, while parents of teens with higher rates of early substance use tended to become increasingly warm towards their children. For a summary of results, see Table 2.

## Discussion

This study examined adolescent adjustment trajectories over two time points from the standpoint of changes in parenting practices. Results regarding parenting practices in early adolescence are discussed, followed by results concerning changes over time in parenting practices. Next, the transactional element is considered. The section continues with a commentary on the implications of the current study. Finally, limitations and future directions are presented.

### *Parenting practices in early adolescence*

The first model of each path analysis accomplished several objectives: it served to explore the stability of each unique variable over time; it revealed relationships between initial parenting practices and early adolescent adjustment; and it exposed the association of certain variables to themselves over time. In each of the four path analyses, all variables were found to be stable over time, allowing for the attribution of differences found in the subsequent models to be made to error or actual change.

In the analysis of depression, Model 1 showed that initial parental warmth was negatively associated with depression in early adolescence. Young adolescents who perceive their parents as warm may be more capable of coping with the changes brought on during this transitional period than their peers, who, lacking a sense of closeness to parents feel more vulnerable and less able to cope. Early adolescent depression was found to be positively associated with depression during middle adolescence. It could be that depressed adolescents find it excessively difficult to break out of their depressive state without caring and skilled assistance. Other findings indicate that stability in parental autonomy granting, behavioural control and warmth was consistent over time. It is possible that parents become comfortable with their child-rearing choices and do not make specific adjustments unless these appear to be warranted by special circumstances.

The analysis of delinquency at this level revealed that degrees of both parental warmth and behavioural control were negatively associated with rates of



delinquency in early adolescence. It is possible that younger adolescents are more amenable to parents' supervision because they are still negotiating the many changes brought on by teenagehood and thus, find comfort in the structure provided. They may also still be quite dependent on their parents' affection and acceptance as they are only beginning to forge friendships of greater importance.

Model 1 for Self-esteem produced very similar results to those of delinquency; both warmth and behavioural control were related to self-esteem of young teens. Here a positive relationship between parenting variables and self-regard was made evident. Young adolescents living in a more structured environment may simply feel safer, leading to better self-confidence. Affection and acceptance from parents is likely to have a great impact on young teens as they begin to explore more of the world outside the safety and comfort of home.

Once again, in the analysis of substance use, warmth came through as a protective factor. Model 1 made clear that more parental warmth was associated with less substance use among early teens. The present study supported previous research findings which show that warmth in family relationships is key to protecting children from many of the dangers often faced for the first time during early adolescence.

#### *Changes in parenting practices from early to middle adolescence*

The first hypothesis was that initial levels of parental autonomy granting, behavioural control and warmth would be related positively to adolescent adjustment over time. Results of this study reveal partial support for this

hypothesis; only early warmth was associated to one of the adjustment variables, self-esteem.

Model 2 of the analysis of teen depression did not bear out this first hypothesis. None of the initial levels of parenting variables were associated with depression in middle adolescence. It may be that parenting which takes place on a daily basis is required to influence how depressed teens feel. The same lack of support occurred in the analysis of delinquency at this level. None of the early parenting variables was related to later levels of delinquency, either. A teenager's decision to engage in a delinquent act may be quite impulsive or closely tied to new types of peer relations and pressures than those previously encountered in early adolescence; this might help to explain why adolescents would not rely on previously learned parenting lessons. In the case of the analysis of self-esteem, however, Model 2 results indicated that early warmth from parents was positively associated with self-esteem in middle adolescence. The positive effects of caring parenting appeared to last in terms of maintaining and even promoting self-esteem over time. It could be that the image adolescents build is based to some degree on the reflections of themselves received from parents, so that positive responding from parents becomes part of internalized structures which are less prone to major fluctuations. No associations between parenting practices and adolescent substance use during the middle years were found. Perhaps early parenting does not prepare most young adolescents for situations in which they must make decisions regarding substance use. Or it may be that despite early parenting, young teens want to experiment with unapproved substances, or they may sense

that it is important to their position in a peer group. Overall, the first hypothesis of this study found merely marginal support. Only middle adolescent self-esteem was related to initial levels of parenting.

The second hypothesis was that an increase in parental autonomy granting and warmth from early to middle adolescence would predict decreases in depression, delinquency and substance use, and increases in self-esteem from early to middle adolescence. This hypothesis drew substantial support, especially for autonomy granting and behavioural control, but also for warmth.

For depression, Model 3 of the analysis found that an increase in parental warmth was related to a decrease in adolescent depression. Teens whose parents were increasingly affectionate and caring tended to feel less depressed over time. It is possible that being able to rely on their parents for comfort as life became more complex helped teens feel less dejection and loneliness. In contrast, teens whose parents became less warm over time tended to become more depressed. Perhaps, as adolescence is a time of great challenge and change, teenagers require a home life that provides constant affection that can encompass their sense of vulnerability and expand to meet their growing needs.

Model 3 of both the delinquency and the self-esteem analyses indicated that autonomy granting and behavioural control were connected to adolescent adjustment trajectories. Increments of parental demandingness, the degree to which parents expect and demand responsible, mature behaviour of their teen, in addition to the encouragement of independence, appears to be increasingly helpful from early to middle adolescence. Higher levels of parental monitoring and limit

setting also seem to assist youth as they navigate their ways from early through middle teenage-hood. These two parenting practices may play a significant role in buffering teens from certain detrimental aspects of adolescence, while also serving to bolster their self-confidence and self-regard, which in turn could make it easier for teens to make better choices more autonomously and to improve their own self-monitoring skills.

In the analysis of substance use at this level, changes in all three parenting variables were revealed to be negatively associated with changes in levels of adolescent substance use. The incremental development of autonomy and self-direction, of parental monitoring and limit setting, and of involved and inductive parenting all seem to guard the growing adolescent from engaging in substance use over the course of early to middle adolescence. Clearly, teens whose parents are committed in an authoritative sense stand to benefit from a secure and safe learning environment in which demandingness and responsiveness are in balance. Teens whose parents tend more towards either indulgent or neglectful strategies are shielded less and are taught less, which may account in part for their lower levels of adjustment over time. Teens from authoritative families, who tend to experience higher behavioural control, but lower autonomy granting and warmth, may be kept from opportunities for delinquency and substances use, but are not necessarily given the tools to make good decisions for themselves, nor the chance to feel proud of their decisions. The lack of responsiveness over time may even affect their ability to feel proud of themselves in general, possibly leading to

increases in depression and decreases in self-esteem from early to middle adolescence.

The results of Model 3 indicate that changes in parental warmth play a role in adolescent trajectories for depression and substance use, which tend to go hand in hand. They also reveal that autonomy granting and behavioural control are linked to delinquency, self-esteem and substance use trajectories. Thus, it may be that these individual parenting practices can work separately at times, as in the case of depression, or together, as seen for substance use, to enhance adolescent well-being over time. It seems that parents who adapt their rearing practices to the changing requirements of their teenagers throughout the early to middle years of adolescence in fact promote increasingly positive changes in their development. Autonomy granting, behavioural control and warmth appear to shield adolescents from depression, delinquency and substance use, while strengthening their self-esteem.

Conversely, teens with parents who tended to be less implicated or active in their parenting roles in relation to these three practices were more likely in general to be prone to higher levels of depression and lower self-esteem, as well as increasingly predisposed to becoming involved in delinquency and engaging in substance use from the early through the middle years of adolescence. Without the affection and guidance of their families, these teens may not have the opportunity to master their changing environment or to depend on their parents to direct them when needed and keep them from harm.

### *Transactional Findings*

In Model 4 of the path analyses for each adjustment variable, we looked at the possibility that teenagers provoke parents into changing their parenting strategies over time via the level of adjustment of given indices. Only two findings came to the fore: lower levels of depression in early adolescence predicted increments of behavioural control, while higher initial depression was related to decreasing behavioural control; and early substance use predicted increasing warmth over time, while lower levels predicted decreases in warmth. No transactional effects were found from delinquency or self-esteem to any of the parenting variables.

Regarding the relationship of early depression to change in behavioural control, it may be that adolescents who do not feel depressed are more socially active and likely to ask for added opportunities for independence. Their parents may deem increases in monitoring and supervision necessary to regulate their children's experiences. Those adolescents who experienced higher levels of depression early on may be quieter, less socially inclined and more passive in general. As depressive symptoms are often internalized and thus, more difficult to detect than externalizing symptoms, the depressive condition may go undetected by parents. Parents may instead misinterpret certain depressive symptoms as non-defiant, tranquil trustworthiness and a preference for being at home.

In the analysis of substance use, results revealed that higher levels of early substance use were connected to increases in parental warmth. It could be that parents who are aware of their teen's substance use begin to attend more to their

child over time. These parents may see substance use as a cry for help and become more affectionate as a result. Parents who do not know their teen is using could become warmer over time because the adolescent may be successfully self-medicating to keep troublesome feelings and “unacceptable” behaviours at bay, and in this way could manage to gain their parents’ increased affection. It is also possible that these teens engage in these activities mainly when away from the home, but behave ideally when with parents to ensure the latter’s continued trust and affection. In contrast, teens with lower initial levels of substance use do not elicit increases in warmth from parents over time. Since less substance use is associated to less change in warmth, it is likely that the fact of substance use in early adolescence is the element which provokes changes in parenting, and not the adolescent’s ability to hide substance use and problems from parents. Thus, it appears that there are circumstances in which levels of adolescent adjustment modify parenting practices across time.

### *Implications*

By increasing our awareness and understanding of the potential influence on adjustment of adapting parenting strategies throughout adolescence, we may be helping youth populations live safer, healthier, more satisfying lives, as parents become better equipped to deal with the challenges of parenting adolescents. For instance, parents may encourage more positive regard from their teens by revising how and how often they demonstrate affection, by allowing their teens greater opportunities for self-expression and decision-making. Adolescents may perceive parents as more understanding and accepting, which may in turn lead to greater

increments of well-adjustment over time. Parents who retain the same level of practices from early to middle adolescence may be perceived by their teens as less understanding of their changing needs and thus, less warm or comprehending. Since adolescence is the precursor to young adulthood, at which time individuals are thought to become more stable in their character traits and behaviours, it is important to learn how to adapt parenting practices in a way that most benefits adolescent development. This type of knowledge could be applied with the aim of providing parents with a progressive and empirically supported action plan that may help enrich the parent-adolescent relationship and overall family relations, while improving adolescent trajectories of adjustment.

While adapting parenting strategies could help parents promote the best potential adjustment outcomes for their teens, it is equally important to understand whether fluctuations in adolescent adjustment influence parenting choices, and thus, how adolescents contribute to the strategies their parents tend to utilize. With a better understanding of the ways in which teens influence parental choices may come a heightened ability to provide both parents and adolescents with the tools to create more positive, reciprocal relationships based in an awareness of their mutual contributions to advantageous parent-teen relations.

Further implications of an expanded appreciation of parent-teen transactions and their influence on adolescent developmental trajectories touch the realm of family therapy, parenting improvement initiatives and teen help programmes. A more comprehensive understanding of the nature of changes in



parenting in relation to changes in teen adjustment could help to enrich the quality of family relations and adolescent well-being through family centered services.

### *Limitations*

A limitation of this study which needs to be underscored was the reliance on self-report questionnaires for all collected data. A particular issue is biased responding about the self. However, the effect of bias was verified and found to be minimal. The questionnaires were established as having sound inter-item and test-retest reliability. In addition, the self-report methods are among the few feasible methods with which to assess changes in parenting and adolescent adjustment across time. Nonetheless, future research would likely benefit from including objective, behavioural assessments of family and adolescent behaviours in order to corroborate self-report, as well as inter-rater reporting where applicable to the same end. A second limitation of the research was that the analyses did not take into account changes in parental marital status from the first year of the study through its fourth year. As research in the field of adolescent relationships and well-being has shown (e.g., Doyle & Markiewicz, 2005; Steinberg, 1991), marital conflict, separation and divorce make significant contributions to parenting practices and adolescent adjustment. It would be important for future research to examine whether change in parental marital status is related to shifts over time in parenting and adolescent developmental trajectories. A final limitation regards the challenges of assessing change in a time of relative stability. The analyses conducted in the study produced conservative results due to stability of the initial models upon which the others were built.

## *Conclusions*

The present study found that initial levels of parenting, particularly warmth, were related to early adolescent adjustment; and that initial levels of parenting were associated to changes in self-esteem, but not in the other indices of adjustment. Other findings point to the importance of adapted parenting practices for the promotion of adolescent well-being over time, as well as to the potential for certain adjustment variables in early adolescence to contribute to changes in parenting practices. Thus, the study demonstrated the importance of assessing initial levels of parenting, as well as changes in parenting over time, and also the role adolescent developmental trajectories play in parenting choices.

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Table 1

Correlation matrix for all time 1 and time 2 parenting and adolescent adjustment variables.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Autonomy Granting T1 -		-.052	.666**	-.167*	-.081	.279**	-.126	.209**	-.052	.134	-.120	-.075	.111	-.083
2. Behavioural Control T1		-	-.013	-.036	-.184*	.114	-.070	.018	.332**	.000	-.002	-.104	.054	-.109
3. Warmth T1			-	-.302**	-.196**	.385**	-.206**	.109	.104	.326**	-.099	-.152	.201**	-.086
4. Depression T1				-	.196**	-.607**	.173*	.045	-.169*	-.131	.346**	-.046	-.378**	.007
5. Delinquency T1					-	-.220**	.588**	.003	-.114	.059	.108	.407**	-.012	.351**
6. Self-esteem T1						-	-.194**	.132	.135	.214**	-.239**	-.172*	.386**	-.154*
7. Substance Use T1							-	.071	.010	.069	.065	.175*	.057	.246**
8. Autonomy Granting T2								-	-.113	.511**	-.053	-.180*	.202**	-.241**
9. Behavioural Control T2									-	.164*	-.145	-.236**	.184*	.246**
10. Warmth T2										-	-.142	-.251**	.244*	-.249**
11. Depression T2											-	-.018	-.632**	.093
12. Delinquency T2												-	.026	.698**
13. Self-esteem T2													-	-.098
14. Substance Use T2														-

\* $p < 0.05$ , \*\* $p < 0.01$ ,  $n = 171$

Table 2.

Findings from each of the four models for all the measures of adolescent adjustment.

Measure of Adolescent Functioning	Model	$\chi^2$ (df)	$\Delta \chi^2$ (df)	CFI	# New Paths That Were Significant
Depression	1 (Stability)	15.18 (15)	NA	.99	5
	2 (Initial Parenting)	13.65 (12)	2.12 (3)	.99	0
	3 (Change in Parenting)	11.04 (11)	2.61 (1)	1.0	1
	4 (Functioning to Parenting)	6.16 (8)	4.88 (3)	1.0	1
Delinquency	1 (Stability)	25.72 (15)	NA	.96	2
	2 (Initial Parenting)	24.37 (12)	1.35 (3)	.95	0
	3 (Change in Parenting)	6.16 (11)	18.21 (1)	1.0	2
	4 (Functioning to Parenting)	5.57 (6)	0.59 (5)	1.0	0

Table 2.

Continued from above.

Measure of Adolescent Functioning	Model	$\chi^2$ (df)	$\Delta \chi^2$ (df)	CFI	# New Paths That Were Significant
Self-esteem	1 (Stability)	20.50 (15)	NA	.98	2
	2 (Initial Parenting)	19.48 (12)	1.02 (3)	.97	2
	3 (Change in Parenting)	8.82 (9)	10.66 (3)	1.0	2
	4 (Functioning to Parenting)	5.78 (6)	3.04 (3)	1.0	0
Substance Use	1 (Stability)	41.52 (15)	NA	.90	1
	2 (Initial Parenting)	39.26 (12)	2.26 (3)	.89	0
	3 (Change in Parenting)	10.23 (9)	29.03 (3)	1.0	3
	4 (Functioning to Parenting)	6.10 (6)	4.13 (3)	1.0	1

## Appendix A

### Measures



# GENERAL INFORMATION

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1

This information will help us describe the participants in our study.

1. Age:

Date of Birth:   DAY /   MONTH /   YEAR

2. Sex: ☐ Female ☐ Male

3. Grade: ☐ 7 ☐ 8 ☐ 9 ☐ 10

4. My mom is (☒ one box):

- ☐ Single ☐ Divorced  
☐ Common-law ☐ Widowed  
☐ Married ☐ Other  
☐ Separated

5. My dad is (☒ one box):

- ☐ Single ☐ Divorced  
☐ Common-law ☐ Widowed  
☐ Married ☐ Other  
☐ Separated

6. Who lives in your house with you?

(☒ all that apply)

- ☐ Mom ☐ Sisters/Stepsisters  
☐ Dad ☐ Brothers/Stepbrothers  
☐ Stepmom ☐ Other (Specify)  
☐ Stepdad \_\_\_\_\_

7. I have   sister(s)/stepsister(s).

8. I have   brother(s)/stepbrother(s).

9. What is your mother tongue (first language)?

- ☐ English ☐ French ☐ Other (specify) \_\_\_\_\_

10. What languages do you speak at home?

- ☐ English ☐ French ☐ Other (specify) \_\_\_\_\_

11. My ethnic/cultural background is

(☒ all that apply)

- ☐ English ☐ Asian  
☐ French ☐ South-West Asian  
☐ Aboriginal ☐ Middle Eastern  
☐ African ☐ Latin American  
☐ Other European ☐ Other (specify): \_\_\_\_\_

12. I have lived in Canada   year(s).

13. Performance in academic subjects.

(☒ a box for each subject that you take)

a. English

- ☐ Failing ☐ Below Average ☐ Average ☐ Above Average

b. History or Social Studies

- ☐ Failing ☐ Below Average ☐ Average ☐ Above Average

c. Mathematics

- ☐ Failing ☐ Below Average ☐ Average ☐ Above Average

d. Science

- ☐ Failing ☐ Below Average ☐ Average ☐ Above Average

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# GENERAL INFORMATION

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This information will help us describe the participants in our study.

1. Age:

Date of Birth:   DAY /   MONTH /   YEAR

2. Sex: ☐ Female ☐ Male

3. Grade: ☐ 8 ☐ 9 ☐ 10 ☐ 11

4. My mom is currently ( ☒ one box):

- ☐ Married to my dad (or living with)  
☐ Divorced/Separated ☐ Widowed  
☐ Single ☐ Other (specify)  
☐ Remarried

5. My dad is currently ( ☒ one box):

- ☐ Married to my mom (or living with)  
☐ Divorced/Separated ☐ Widowed  
☐ Single ☐ Other (specify)  
☐ Remarried

6. Who lives in your home with you?

☒ all that apply. (If you live in more than one home, tell us about the home you live in most.)

- ☐ Mom ☐ Sisters/Stepsisters  
☐ Dad ☐ Brothers/Stepbrothers  
☐ Stepmom ☐ Other (Specify)  
☐ Stepdad

7. For questions 4 to 10, have any of these people/living situations changed since last year?

☐ Yes ☐ No

8. Performance in academic subjects.

( ☒ a box for each subject that you take)

a. English

☐ Failing ☐ Below Average ☐ Average ☐ Above Average

b. History/Economics/Law /Geography

☐ Failing ☐ Below Average ☐ Average ☐ Above Average

c. Mathematics

☐ Failing ☐ Below Average ☐ Average ☐ Above Average

d. Science/Physics/Chemistry/Biology

☐ Failing ☐ Below Average ☐ Average ☐ Above Average

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We would like to know a little more about your parents. Please complete the following as best you can.

### PARENT INFORMATION

Please answer about the mom/stepmom who lives with you ( ☒ one):

☐ Mom      OR      ☐ Stepmom

1. What level of education does your mom have ( ☒ the highest level completed)?

- ☐ Elementary School
- ☐ High School
- ☐ CEGEP/Technical School
- ☐ University - Bachelor's
- ☐ University - Master's or Doctorate, Law degree

2. Is your mom working now at a paid job?    ☐ Yes    ☐ No

**If she is not currently working at a paid job, go to question # 7.**

3. Does she work:    ☐ Full-time (35+ hours a week)    OR    ☐ Part-time?

4. What does your mother do for a living (e.g., doctor, office manager, factory worker, salesperson)?

---

5. What are her main activities at work?

---

6. What industry is this in (e.g. what does the employer sell or make)?

---

7. **If your mom is not currently working at a paid job, would you say she was looking for work, keeping house, or unable to work ( ☒ one only)?**

☐ Looking for work      ☐ Keeping house      ☐ Unable to work

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**Please answer about the dad/stepdad who lives with you (☒ one):**

☐ Dad      OR      ☐ Stepdad

8. What level of education does your dad have (☒ the highest level completed)?

- ☐ Elementary School
- ☐ High School
- ☐ CEGEP/Technical School
- ☐ University - Bachelor's
- ☐ University - Master's or Doctorate, Law degree

9. Is your dad working now at a paid job?    ☐ Yes    ☐ No

If he is not currently working at a paid job, go to question 14.

10. Does he work:    ☐ Full-time (35+ hours a week)    OR    ☐ Part-time?

11. What does your father do for a living (e.g., doctor, office manager, factory worker, salesperson)?

---

12. What are his main activities at work?

---

13. What industry is this in (e.g. what does the employer sell or make)?

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14. If your dad is not currently working at a paid job, would you say he was looking for work, keeping house, or unable to work (☒ one only)?

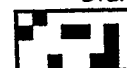
☐ Looking for work    ☐ Keeping house    ☐ Unable to work

15. How well off financially is your family?

- ☐ Very well off
- ☐ Quite well off
- ☐ Average
- ☐ Not very well off
- ☐ Not at all well off

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# WHAT IS YOUR FAMILY LIKE?

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For each sentence, decide how much you agree or disagree with it. Make an ☒ in the box on the scale that is best for you.

Strongly disagree	Disagree	In the middle	Agree	Strongly agree
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- |   |                            |                            |                            |                            |                            |
|---|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| 1. My parents really expect me to follow family rules.  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 2. If I don't behave myself, my parents will punish me.   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 3. I can count on my parents to help me out if I have a problem.                                  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 4. My parents give me a lot of freedom.   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 5. When I do something wrong, my parents do not punish me.  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 6. When I have a problem or don't feel well, my parents are willing to help me figure things out. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 7. My parents are happy when I do something well.   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 8. My parents let me do whatever I want.  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 9. My parents praise me when I am successful or have done well.                                   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 10. My parents believe I have a right to my own point of view.                                    | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 11. My parents and I have fun talking and doing things together.                                  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 12. My parents do special things for me.  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 13. My parents let me think for myself.   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 14. My parents are happy with me most of the time.  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 15. We don't have many rules at home and the rules we have aren't enforced.                       | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 16. My parents encourage me to make decisions for myself carefully.                               | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |

Strongly disagree	Disagree	In the middle	Agree	Strongly agree
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Draft

# WHAT IS YOUR FAMILY LIKE?

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Draft

For each sentence, decide how true it is for you. Mark an ☒ in the box that is true for you.

If you live in more than one home, tell us about the parents in the home you live in the most.

1. My parents really expect me to follow family rules.
2. If I don't behave myself, my parents will punish me.
3. My parents soon forget a rule they have made.
4. I can count on my parents to help me out if I have a problem.
5. My parents give me a lot of freedom.
6. When I do something wrong, my parents do not punish me.
7. My parents nag me about little things.
8. When I have a problem or don't feel well, my parents are willing to help me figure things out.
9. My parents hit or threaten to hit me.
10. My parents are happy when I do something well.
11. My parents only keep rules when it suits them.
12. My parents let me do whatever I want.
13. My parents get angry and yell at me.
14. My parents praise me when I am successful or have done well.

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
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<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

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## WHAT IS YOUR FAMILY LIKE?

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15. My parents believe I have a right to my own point of view. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
16. My parents and I have fun talking and doing things together. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
17. My parents threaten punishment more often than they use it. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
18. My parents do special things for me. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
19. My parents let me think for myself. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
20. My parents enforce a rule or do not enforce a rule depending on their mood. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
21. My parents are happy with me most of the time. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
22. We don't have many rules at home and the rules we have aren't enforced. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
23. My parents encourage me to make decisions for myself carefully. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5



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People sometimes have different feelings and ideas. This form lists feelings and ideas in groups. From each group, pick one sentence that describes you best for the past two weeks. There are no right or wrong answers. Just pick the sentence that best describes the way you have been recently.

From each group, put an ☒ next to the sentence that best describes your feelings and ideas in the past two weeks.

- 
1. ☐ I am sad once in a while.  
☐ I am sad many times.  
☐ I am sad all the time.

---

  2. ☐ Nothing will ever work out for me.  
☐ I am not sure if things will work out for me.  
☐ Things will work out for me O.K.

---

  3. ☐ I do most things O.K.  
☐ I do many things wrong.  
☐ I do everything wrong.

---

  4. ☐ I have fun in many things.  
☐ I have fun in some things.  
☐ Nothing is fun at all.

---

  5. ☐ I am bad all the time.  
☐ I am bad many times.  
☐ I am bad once in a while.

---

  6. ☐ I think about bad things happening to me once in a while.  
☐ I worry that bad things will happen to me.  
☐ I am sure that terrible things will happen to me.

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7. ☐ I hate myself.  
☐ I do not like myself.  
☐ I like myself.
- 
8. ☐ All bad things are my fault.  
☐ Many bad things are my fault.  
☐ Bad things are not usually my fault.
- 
9. ☐ I feel like crying everyday.  
☐ I feel like crying many days.  
☐ I feel like crying once in a while.
- 
10. ☐ Things bother me all the time.  
☐ Things bother me many times.  
☐ Things bother me once in a while.
- 
11. ☐ I like being with people.  
☐ I do not like being with people many times.  
☐ I do not want to be with people at all.
- 
12. ☐ I cannot make up my mind about things.  
☐ It is hard to make up my mind about things.  
☐ I make up my mind about things easily.
- 
13. ☐ I look O.K.  
☐ There are some bad things about my looks.  
☐ I look ugly.
- 
14. ☐ I have to push myself all the time to do my school work.  
☐ I have to push myself many times to do my school work.  
☐ Doing school work is not a big problem.
- 
15. ☐ I have trouble sleeping every night.  
☐ I have trouble sleeping many nights.  
☐ I sleep pretty well.
- 
16. ☐ I am tired once in a while.  
☐ I am tired many days.  
☐ I am tired all the time.

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- 
17. ☐ Most days I do not feel like eating.  
☐ Many days I do not feel like eating.  
☐ I eat pretty well.
- 
18. ☐ I do not worry about aches and pains.  
☐ I worry about aches and pains many times.  
☐ I worry about aches and pains all the time.
- 
19. ☐ I do not feel alone.  
☐ I feel alone many times.  
☐ I feel alone all the time.
- 
20. ☐ I never have fun at school.  
☐ I have fun at school only once in a while.  
☐ I have fun at school many times.
- 
21. ☐ I have plenty of friends.  
☐ I have some friends but I wish I had more.  
☐ I do not have any friends.
- 
22. ☐ My school work is alright.  
☐ My school work is not as good as before.  
☐ I do very badly in subjects I used to be good in.
- 
23. ☐ I can never be as good as other kids.  
☐ I can be as good as other kids if I want to.  
☐ I am just as good as other kids.
- 
24. ☐ Nobody really loves me.  
☐ I am not sure if anybody loves me.  
☐ I am sure that somebody loves me.
- 
25. ☐ I usually do what I am told.  
☐ I do not do what I am told most times.  
☐ I never do what I am told.
- 
26. ☐ I get along with people.  
☐ I get into fights many times.  
☐ I get into fights all the time.



## FEELINGS AND IDEAS (CDI)

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4

People sometimes have different feelings and ideas. This form lists feelings and ideas in groups. From each group, pick one sentence that describes you best for the past two weeks. There are no right or wrong answers.

From each group, put an ☒ next to the sentence that best describes your feelings and ideas in the past two weeks.

- 
1. ☐ I am sad once in a while.  
☐ I am sad many times.  
☐ I am sad all the time.
- 
2. ☐ Nothing will ever work out for me.  
☐ I am not sure if things will work out for me.  
☐ Things will work out for me O.K.
- 
3. ☐ I do most things O.K.  
☐ I do many things wrong.  
☐ I do everything wrong.
- 
4. ☐ I think about bad things happening to me once in a while.  
☐ I worry that bad things will happen to me.  
☐ I am sure that terrible things will happen to me.
- 
5. ☐ I hate myself.  
☐ I do not like myself.  
☐ I like myself.
- 
6. ☐ All bad things are my fault.  
☐ Many bad things are my fault.  
☐ Bad things are not usually my fault.
- 

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7. ☐ Things bother me all the time.  
☐ Things bother me many times.  
☐ Things bother me once in a while.
- 
8. ☐ I cannot make up my mind about things.  
☐ It is hard to make up my mind about things.  
☐ I make up my mind about things easily.
- 
9. ☐ I look O.K.  
☐ There are some bad things about my looks.  
☐ I look ugly.
- 
10. ☐ I never have fun at school.  
☐ I have fun at school only once in a while.  
☐ I have fun at school many times.
- 
11. ☐ I can never be as good as other kids.  
☐ I can be as good as other kids if I want to.  
☐ I am just as good as other kids.
- 
12. ☐ Nobody really loves me.  
☐ I am not sure if anybody loves me.  
☐ I am sure that somebody loves me.
- 

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# BEHAVIOURS

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This section asks about different behaviours that teenagers are sometimes involved in. Your answers are very important to us: we want to know what really happens for people your age so please answer all questions **honestly**. Remember, **ALL YOUR ANSWERS ARE CONFIDENTIAL**.

For each question,

- First indicate whether or not you have **ever** done what is described ( ☒ YES or NO).
- Then, if you answer YES, indicate how many times **in the last year** you have done each behaviour.
- If you answer NO, skip to the next question.

Have you ever ...?

1. Purposely damaged or destroyed property (includes vandalism/graffiti) ☐ Yes ☐ No  
belonging to your parents or other family members?

If "YES", how many times in the last year? If "NO", skip to the next question.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

2. Purposely damaged or destroyed property (includes vandalism/graffiti) ☐ Yes ☐ No  
belonging to your school or employer?

If "YES", how many times in the last year? If "NO", skip to the next question.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

3. Purposely damaged or destroyed other property (includes vandalism/graffiti) ☐ Yes ☐ No  
that did not belong to you, not counting family, school, or work property?

If "YES", how many times in the last year? If "NO", skip to the next question.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

4. Knowingly bought, sold or held stolen goods or tried to do any of these things? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

5. Carried a hidden weapon other than a plain pocket knife? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

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# BEHAVIOURS

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6. Attacked someone with the idea of seriously hurting that person? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

7. Been involved in gang fights? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

8. Stolen money or other things from your parents or other members of your family? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

9. Stolen money, goods, or property from school or from the place where you work? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

10. Hit or threatened to hit one of your parents? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

11. Hit or threatened to hit anyone else (e.g., friends, strangers)? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

12. Been loud, rowdy, or unruly in a public place (disorderly conduct)? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more



## BEHAVIOURS

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13. Tried to cheat someone by selling them something that was worthless or not what you said it was?

☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

14. Bought liquor as a minor? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

15. Avoided paying for such things as movies, bus or metro rides, and food? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

16. Been drunk in a public place? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

17. Stolen or tried to steal things worth between \$5.00 and \$50.00? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

18. Broken into or tried to break into a building (including an abandoned building) or vehicle to steal something or just to look around?

☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

19. Made obscene telephone calls (such as calling someone and saying dirty things)? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more





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## BEHAVIOURS

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This section asks about different behaviours that teenagers are sometimes involved in. Your answers are very important to us: we want to know what really happens for people your age so please answer all questions **honestly**. Remember, **ALL YOUR ANSWERS ARE CONFIDENTIAL**.

For each question,

- Indicate how many times in the last year you have done each behaviour.

How many times in the past year have you ...

1. Purposely damaged or destroyed property (includes vandalism/graffiti)  
belonging to your school or employer?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10   ☐ 11   ☐ 12   ☐ 13 or more

2. Purposely damaged or destroyed other property (includes vandalism/graffiti)  
that did not belong to you, not counting family, school, or work property?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10   ☐ 11   ☐ 12   ☐ 13 or more

3. Carried a hidden weapon other than a plain pocket knife?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10   ☐ 11   ☐ 12   ☐ 13 or more

4. Attacked someone with the idea of seriously hurting that person?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10   ☐ 11   ☐ 12   ☐ 13 or more

5. Been involved in gang fights?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10   ☐ 11   ☐ 12   ☐ 13 or more



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## BEHAVIOURS

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How many times in the past year have you ...

---

6. Hit or threatened to hit anyone (e.g., friends, strangers)?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10   ☐ 11   ☐ 12   ☐ 13 or more

---

7. Been loud, rowdy, or unruly in a public place (disorderly conduct)?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10   ☐ 11   ☐ 12   ☐ 13 or more

---

8. Tried to cheat someone by selling them something that was worthless or not what you said it was?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10   ☐ 11   ☐ 12   ☐ 13 or more

---

9. Bought liquor as a minor?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10   ☐ 11   ☐ 12   ☐ 13 or more

---

10. Been drunk in a public place?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10   ☐ 11   ☐ 12   ☐ 13 or more

---

11. Stolen or tried to steal things worth between \$5.00 and \$50.00?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10   ☐ 11   ☐ 12   ☐ 13 or more

---

12. Broken into or tried to break into a building (including an abandoned building)  
or vehicle to steal something or just to look around?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10   ☐ 11   ☐ 12   ☐ 13 or more

---



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# SELF-DESCRIPTION QUESTIONNAIRE (SDQ-II)

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Please read each sentence and choose the answer that is best for you. There are six possible answers for each question: "True", "False", and four answers in between. Make an ☒ in the box under the answer you choose.

	False	Mostly False	More False than True	More True than False	Mostly True	True
1. Overall, I have a lot to be proud of.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
2. Most things I do well.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
3. Nothing I ever do seems to turn out right.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
4. Overall, most things I do turn out well.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
5. Overall, I'm a failure.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6

False	Mostly False	More False than True	More True than False	Mostly True	True
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# SELF-DESCRIPTION QUESTIONNAIRE (SDQ-II)

Draft

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Please read each sentence and choose the answer that is best for you. There are six possible answers for each question: "True", "False", and four answers in between. Make an ☒ in the box under the answer you choose.

	False	Mostly False	More False than True	More True than False	Mostly True	True
1. Overall, I have a lot to be proud of.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
2. Most things I do, I do well.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
3. Most teens try to avoid me.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
4. Nothing I ever do seems to turn out right.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
5. I have lots of same-sex friends.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
6. Overall, most things I do turn out well.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
7. I don't get along very well with other teens of the same sex.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
8. Overall, I'm a failure.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
9. I make friends easily with other teens of the same sex.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
10. I am popular with teens of the same sex.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
	False	Mostly False	More False than True	More True than False	Mostly True	True

## Alcohol and Drug Use

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The next questions ask about your use of alcohol and drugs. As you did before, first indicate whether or not you have ever done what is asked. Next, indicate how many times you have done the behaviour in the last year.

### Have you ever ...?

1. Used alcoholic beverages (beer, wine, liquor)? ☐ Yes ☐ No

If "YES", how many times in the last year? If "NO", skip to the next question.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

2. Been drunk or high on alcoholic beverages (beer, wine, liquor)? ☐ Yes ☐ No

If "YES", how many times in the last year? If "NO", skip to the next question.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

3. Been drunk or high on alcoholic beverages at school or at work (beer, wine, liquor)? ☐ Yes ☐ No

If "YES", how many times in the last year? If "NO", skip to the next question.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

4. Used marijuana, or hashish (mari, weed, grass, pot, hash)? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

5. Been high on marijuana, or hashish (mari, weed, grass, pot, hash)? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

6. Been high on marijuana, or hashish at school or at work (mari, weed, grass, pot, hash)? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

7. Used hallucinogens (LSD, acid, mescaline, peyote, magic mushrooms), amphetamines (uppers, speed, pep pills, bennies, dexies, diet pills) or barbiturates (downers, reds, yellows, blues, rainbows, goof balls, sleeping pills) that were not prescribed by a doctor? ☐ Yes ☐ No

If "YES", how many times in the last year?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

8. During the past year, have you used tobacco? ☐ Yes ☐ No

9. When using tobacco, how much do you usually use? Please indicate *either*.

--	--

cigarettes per day

OR

--	--

cigarettes per month

Draft

## Alcohol and Drug Use

Please do not mark in this area

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Draft

The next questions ask about your use of alcohol and drugs. As you did before, indicate how many times you have done the behaviour in the last year.

How many times in the past year have you ...

1. Been drunk or high on alcoholic beverages (beer, wine, liquor)?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

2. Been drunk or high on alcoholic beverages at school or at work (beer, wine, liquor)?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

3. Used marijuana, or hashish (mari, weed, grass, pot, hash)?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

4. Been high on marijuana, or hashish (mari, weed, grass, pot, hash)?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

5. Been high on marijuana, or hashish at school or at work (mari, weed, grass, pot, hash)?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 or more

6. During the past year, have you used tobacco? ☐ Yes ☐ No

7. When using tobacco, how much do you usually use? Please indicate *either*:

--	--

cigarettes per day

OR

--	--

cigarettes per month

Draft

**Appendix B**  
**Letter and Consent Form**

Centre for Research in Human Development  
Department of Psychology  
tel: (514) 848-2424 Ext. 7560 fax: (514) 848-2815

JHSiv  
October, 2004



Dear Student,

Over the last three years, as you may remember, you participated in the Concordia Relationships and Well-being Project, telling us about your relationships, feelings and behaviour. **We are now writing to ask you to help us in the fourth year of our study.**

We are asking you to complete questionnaires again during class time at school, at times convenient for your teacher. This will take about two class periods during the year. The questionnaires are mostly like last year, and ask about your relationships with parents and friends, and how you and your friends feel and act (e.g., mood, helping others, making decisions, and breaking rules). We are also asking you to permit the school to give us your grades for the past three years. Of course, we keep all of your information confidential

We really appreciate that you helped us in the past. **Your help again this year is very important** because we need to understand how changes affect students your age over time. **Those students who choose to participate again this year will be entered in THE GRAND-PRIZE draw for a SONY DISCMAN !!!**

Please complete the enclosed consent form, and return it to your to the French teacher as soon as possible, *even if you say no*. Although we hope that you say yes, it is your choice whether or not to participate. **All students returning the form will have their names entered in a draw for Cineplex Odeon movie passes and HMV gift certificates!!**

If you have any questions feel free to call one of us at the numbers below.  
Thanks a lot!

Stine Linden-Andersen, B.A.  
M.A. Candidate  
(848-2424 ext. 7560)

Anna-Beth Doyle, Ph.D.  
Professor of Psychology  
(848-2424 Ext. 7538)

Clairneige Motzoi, M. A.  
Ph.D. Candidate  
(848-2424 ext. 7560)

**Consent Form For Students To Participate in Research**

Student's Name: \_\_\_\_\_

Student's Date of Birth: \_\_\_\_\_ Age: \_\_\_\_\_

School: LCCHS Grade: \_\_\_\_\_ French Teacher's name/class: \_\_\_\_\_

**1. Check one line:**

\_\_\_\_\_ YES, I agree to **participate** in the Relationships and Well-being study conducted by Dr. Anna Beth Doyle, and Dr. Dorothy Markiewicz.  
(Student please sign below).

\_\_\_\_\_ Before I agree to participate, please call me or my parents to discuss the project.  
Name \_\_\_\_\_ and phone number \_\_\_\_\_.

\_\_\_\_\_ NO, I do not agree to participate.

**2. Check one line:**

I agree that the researchers are allowed to obtain my school grades, for research purposes only

YES \_\_\_\_\_ NO \_\_\_\_\_

**IF YOU AGREE TO PARTICIPATE, please complete the following:**

I have been informed that the purpose of the study is to understand my relationships with family and peers, adjustment and well-being. Participation will involve approximately 1 ½ hours of my class time during the year, completing questionnaires about friendships and family relationships, self-perceptions and emotional and behavioural adjustment. I understand that **all information will be confidential** to the research team and identified only by number, although if I report life-threatening circumstances, the research team will legally have to break confidentiality. I understand that general results may be published. I also understand that I may withdraw consent and may discontinue participation at any time.

Student's Signature: \_\_\_\_\_ Date \_\_\_\_\_

Parent(s) Name(s) \_\_\_\_\_

Address \_\_\_\_\_

City & Postal Code \_\_\_\_\_ Phone Number \_\_\_\_\_

**PLEASE RETURN THIS FORM TO YOUR FRENCH TEACHER AS SOON AS POSSIBLE.**

*If at any time you have questions about your rights as a research participant, please contact Adela Reid, Research Ethics and Compliance Officer, Concordia University, at 514.848.2424, x. 7481 or by email at [Adela.Reid@Concordia.ca](mailto:Adela.Reid@Concordia.ca).*